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ABSTRACT

This is a report on the 2001 after-college earnings of students from Washington State's community and technical colleges. The state board created a wage-based category system for all 500 vocational/job-preparatory programs offered by the 34 state two-year colleges. The programs were divided into high- ($12 or more per hour), middle- ($10.50-$12 per hour), and low-wage (under $10.50 per hour) job-preparatory programs, based on the hourly wage rate for all completers in a particular program. The system is useful in monitoring the equity of enrollment and completion in the high-wage versus the low-wage programs by race and/or gender. The 1998-99 results showed that: (1) 46% of community and technical college completers were in high-wage programs; (2) African Americans were the least likely (37%) to be completers in high-wage programs; and (3) computer technology, engineering technology, and health-related programs such as nursing, dental hygienist, and physical therapy, were among the most common high-wage programs. The appendix provides a listing of all 500 job-preparatory programs. (MKF)

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Washington State Board for Community and Technical Colleges; Education Division

HIGH-, MIDDLE-, AND LOW-WAGE JOB PREPARATORY PROGRAMS – THE CREATION AND USE OF POLICY TOOL BASED ON UI WAGES DATA

May 2001

Overview: Researchers have shown that after-college earnings vary by field of study. Consistent with that notion, the Washington State Board for Community and Technical Colleges (SBCTC) researchers created a wage-based category system for all 500 of the state community and technical college programs. State policy leaders have used this three-part system – high-, middle-, and low-wage programs – to monitor progress on key policy issues over the past three years. Specifically, the category system is used to monitor the equity of enrollment and completion in the high-wage versus the low-wage programs by race and ethnic category and by gender. The system is also used to monitor the extent to which college programs are increasingly focused on higher-wage programs in response to external expectations.

This report provides an appendix showing three levels of aggregation of job preparatory programs by CIP. It also provides the steps followed to use Unemployment Insurance data (UI data) to create the groups.

Literature: The NCES analysis of the 1991 Recent College Graduate Survey shows a distinctly different employment and earnings pattern by student major (U.S. Department of Education, OREI, 1993). Those graduating from health related programs earned $31,500 one year after graduation. Those leaving with humanities degrees earned $19,100. The work of Grubb using the Survey of Income and Program Participation (SIPP) suggests that a similar pattern applies in community and technical colleges (1999).

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UI wage information: The prerequisite is wage data for students. Since 1987 the SBCTC has linked the records of former students from all the colleges with those of the state's Employment Security Department (ESD). This data matching process evolved to become a partnership with other state workforce programs and agencies. A third party vendor translates the ESD data into a format that meets the requirements of the partner's common data standards and is easy to use (Microsoft Access format). The data set includes information on each student's college attendance and pre-, during- and post-college employment. Employment data includes the total quarterly earnings, the industry of the main employer (using SIC), and the county where the student is employed.

This information is not unique to Washington. It is available in all UI systems. What is unique to Washington is the availability of hours worked and hourly wage in the quarter. Although similar information is not currently available in most other states, researchers can substitute monthly earnings (quarterly earnings divided by three).

We have elected to describe median earnings, wage and hour data rather than the mean. Earnings and, to a lesser extent, hours do not follow a normal curve. We often look at earnings over time so it is important to look at inflation-adjusted data. To meet that need each record includes both the actual hourly wage rate and quarterly earnings, and inflation-adjusted wages and earnings (using the implicit price deflator to translate into a 1992 value). Researchers then use a table of price factors to translate the stored 1992 value into current inflation-adjusted value. (Seppanen, 1998)

Creating the categories: The goals for creating the categories were to create a system that was more manageable than the 500 individual program CIPs, and that was simpler to communicate to various stakeholders.

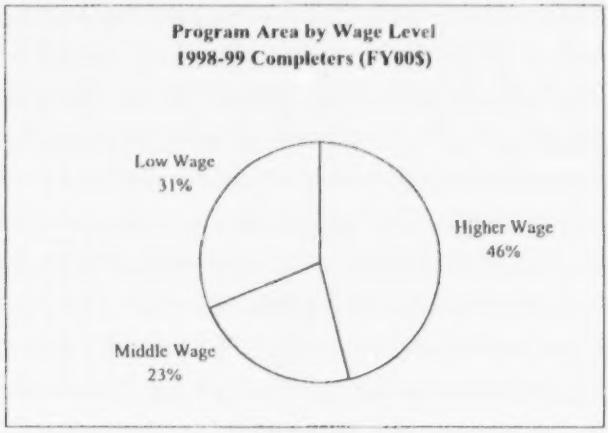
The steps used to create the categories during 1995-96 were:

- Using hourly rates for all completers by CIP from the UI data match, the initial lowest level aggregation was based on groupings used for earlier versions of Carl Perkins reporting.
- The hourly rates for program CIPs were associated with each of the Carl Perkins categories.
- The next step required detailed analysis of each lowest level CIP category. The goal was to have at least 40 students in each group to insure stability in the median wage from year to year. Also completers in each aggregation needed to have similar hourly earnings pattern—not significantly higher nor lower than the other programs in the aggregate category. In some instances, there were enough students in a single CIP, such as ADN nursing, to warrant a separate category. In other instances, the individual programs were too small and were aggregated in "Other" categories. This process created the first level of aggregation.
- The second level of aggregation continued the process of grouping. The third and highest level of aggregation--high-, medium-, and low-wage categories--was based on natural groupings of hourly rates. The cutoff demarking high to middle and middle to low is somewhat arbitrary.

Validating the categories: Westat, a third-party contractor, validated the lowest level of aggregation when it used the categories to conduct a Net Impact Study in 1997 (see http://www.wa.gov/wtb/westat.html). This study found that those enrolled in low wage programs experienced a negative net impact from college going, and all others had the expected positive net impact.

In 2000, the Washington Workforce Training and Education Coordinating Board (WTECB) reviewed the categories including data from other sectors (private career schools and high school vocational programs). The WTECB disaggregated some categories, but in general validated the system.

Monitor Enrollment and Completion: Washington has a strong focus on increasing the role of community and technical colleges in offering high-wage programs. This category system is used to monitor the extent to which completers are from high-, middle-, and low-wage programs. Over time the high-wage percentage has increased from 44 to 46 percent. The aggregation apply to some 14,000 annual job preparatory completers. Completers include graduates with degrees and certificates, apprentice completers, completers from unique programs (Exit Code 9), and those who leave programs with 45 or more vocational credits but no degree or certificate. Some 46 percent of completers got their training in programs categorized as high-wage programs where the typical completer (median wage) earns more than $12 an hour. These are regarded as high-wage occupational programs compared to the middle- ($10.50 - $12) and lower-wage programs (under $10.50 an hour), that account for 23 percent (middle) and 31 percent (low).



Not All Programs Have Equal Benefits. In using data from the longitudinal Survey of Income and Program Participant data, Grubb (1995) showed that some programs of study appeared to provide no gain for students. In Washington, we have come to the common understanding that what students earn depends a good deal on their program of study. The wages for each program of study may be related to labor market factors rather than program quality. We have not yet formed a common view that the programs with lower earnings are a sign of no gain for the students, though there is some evidence to that effect (Westat, 1997). (Seppanen, 1998).

The table on the next page shows the distribution of graduates by lowest level aggregation.

Class of 98-99 Completers by Major Area of Study and Median Wage and Earnings

	Program Area	Completers	With Wage Data	Median Wage	Annual Earnings
High-	Dental Hygienist	106	101	$34.11	$50,057
Wage	Associate Degree Nurse	848	688	$19.24	$34,654
Programs	Medical Xray	117	101	$17.60	$38,475
	Information Technology	1,420	997	$14.78	$28,570
	Other Health Tech	225	171	$14.57	$26,541
	Computer Maintenance Tech	327	237	$14.34	$27,839
	Engineering Technology	147	109	$14.17	$27,782
	Electrical Equipment Repair	253	187	$14.06	$26,460
	Industrial Technology (except electronics tech)	405	248	$14.01	$29,132
	Welding	210	157	$13.93	$24,842
	Electronics Technology	295	223	$13.57	$27,197
	Practical Nurse	406	333	$13.37	$24,182
	Airframe/Power Plant	123	83	$13.26	$27,592
	Physical Therapy	80	70	$13.14	$24,262
	Med Lab Tech/Histologic	61	48	$12.94	$23,620
	Paramedic EMT,Operating Tech	309	228	$12.59	$26,079
	Drafting	193	153	$12.54	$25,103
	Occupational Therapy	49	39	$12.48	$20,596
	Transportation Operators	289	225	$12.43	$24,661
	Legal Assistant	344	263	$12.18	$23,362
	Protective Services	556	430	$12.09	$22,621
	Machinist	252	209	$12.08	$23,277
	Total High Wage Programs	**7,015**	**5,300**	**$14.30**	**$27,352**
	% of Total	**46%**	**48%**		
Middle-	Construction Trades	236	159	$11.96	$20,381
Wage	Pharmacy Assisting	123	99	$11.64	$22,197
Programs	Accounting	517	394	$11.60	$22,539
	Dental Assisting	229	190	$11.49	$19,444
	Precision, Production, Crafts	413	252	$11.43	$21,313
	Other Health Services	184	102	$11.25	$13,952
	Auto Diesel	644	473	$11.04	$21,795
	Other Technical	189	120	$10.87	$16,901
	Medical Assisting	233	190	$10.84	$19,851
	Commercial & Graphics Art	263	179	$10.69	$19,758
	Managerial and Managerial Support	520	346	$10.52	$19,144
	Total Middle Wage Programs	**3,551**	**2,504**	**$11.14**	**$20,670**
	% of Total	**23%**	**23%**		
Low-	Agriculture, Forestry and Fisheries	441	262	$10.49	$18,328
Wage	Social Services	366	238	$10.26	$17,986
Programs	Administrative Support	1,619	1,165	$10.13	$19,272
	Marketing and Sales	687	455	$10.11	$17,365
	Veterinarian Assistant	72	61	$9.84	$18,866
	Culinary Arts	343	237	$9.48	$17,160
	Teaching/Library Assistant	155	110	$9.46	$12,301
	Early Childhood Ed	396	242	$9.14	$14,046
	Other Services	80	56	$9.01	$14,496
	Cosmetology	289	188	$8.60	$13,655
	Nursing Assistant	246	195	$8.56	$14,021
	Total Low Wage Programs	**4,694**	**3,209**	**$9.86**	**$17,356**
	% of Total	**31%**	**29%**		
	Apprentice	625	574	$26.01	$48,518
	Job Preparatory Completers	15,260	11,013	$11.91	$21,996
	All Completers	15,885	11,587	$12.17	$22,623

Over the past four years, while the median earnings for all these programs have climbed, the relative place on the low to high-wage list has changed only for a small number of programs. The protective service programs, for example, moved up the middle-wage to high-wage list over time as the programs were better aligned with employment in the state's prisons.

Equity: The category system is used to monitor the state's equity goal related to enrollment and completion in the high-wage versus the low-wage programs by race and ethnic category. Students of color are underrepresented but increasing in percentage in the high-wage programs and over represented in the low-wage programs. The State Board has set a goal to increase that percentage to equity with white students.

African American and Native American students completing vocational programs are less likely than whites to be completers in the higher wage occupational areas. The pattern has improved for all groups of color however.

% of Completers from High Wage Occupational Programs
By Exit Year

	95-96	96-97	97-98	98-99	Gap From Average
Asian/Pacific Islander	37%	36%	41%	49%	+3%
African American	34%	36%	32%	37%	-9%
Latino/Hispanic	39%	39%	43%	46%	0%
Native American	33%	39%	35%	44%	-2%
Of Color	36%	37%	38%	45%	-1%
White	45%	45%	44%	46%	0%
Average	44%	44%	43%	46%	

The category system is being used as an additional approach that goes beyond the Carl Perkins Non-traditional indicator. In this case the percentage of women in high-wage programs is monitored. Staff working with women's programs have established a goal to increase the representation of women in high-wage programs to equity with men.

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Appendix A
CIPs at Three Levels of Aggregation

CIP	CIP_TITLE	FIRST LEVEL	SECOND LEVEL	HIGHEST LEVEL
010101	AGRI BUSINESS & MGMT	Managerial and Managerial Support	Other Services	Low
010104	FARM & RANCH MANAGEMENT	Ag, Forestry and Fisheries	Other Services	Low
010198	AGRI NATURAL RESOURCES	Precision, Production, Crafts	Other Services	Low
010201	AGRI MECHANICS & OPERATION	Precision, Production, Crafts	Other Technical	Middle
010204	AGRI POWER MACHINERY MECH	Precision, Production, Crafts	Other Technical	Middle
010297	TURF EQUIPMENT MECHANICS	Auto Diesel	Auto & Diesel Mechanics	Middle
010298	FARM IRRIGATION TECHNOLOGY	Other Technical	Other Services	Low
010301	AGRICULTURAL PRODUCTION	Ag, Forestry and Fisheries	Other Services	Low
010302	ANIMAL PRODUCTION	Ag, Forestry and Fisheries	Other Services	Low
010303	AQUACULTURE	Ag, Forestry and Fisheries	Other Services	Low
010304	CROP PRODUCTION	Ag, Forestry and Fisheries	Other Services	Low
010391	MILKER	Ag, Forestry and Fisheries	Other Services	Low
010392	ORCHARD WORKER	Ag, Forestry and Fisheries	Other Services	Low
010393	VITICULTURE	Ag, Forestry and Fisheries	Other Services	Low
010394	TREE FRUIT PRODUCTION	Ag, Forestry and Fisheries	Other Services	Low
010397	BEEKEEPING	Ag, Forestry and Fisheries	Other Services	Low
010398	AQUATIC SPECIALIST	Ag, Forestry and Fisheries	Other Services	Low
010401	AGRI PRODUCTS & PROCESSING	Precision, Production, Crafts	Other Technical	Middle
010501	AGRI SUPPLIES RETAIL/WHOLE	Precision, Production, Crafts	Other Technical	Middle
010507	HORSE HANDLING & CARE	Ag, Forestry and Fisheries	Other Services	Low
010596	HORSESHOEING (FARRIERY)	Ag, Forestry and Fisheries	Other Services	Low
010597	AG CHEMICALS	Ag, Forestry and Fisheries	Other Services	Low
010598	SEED & GRAIN	Ag, Forestry and Fisheries	Other Services	Low
010601	HORTICULTURE	Ag, Forestry and Fisheries	Other Services	Low
010603	FLORICULTURE	Ag, Forestry and Fisheries	Other Services	Low
010604	GREENHOUSE OP & MGMT	Ag, Forestry and Fisheries	Other Services	Low
010605	LANDSCAPING	Ag, Forestry and Fisheries	Other Services	Low
010606	NURSERY OP & MGMT	Ag, Forestry and Fisheries	Other Services	Low
010607	TURF MANAGEMENT	Ag, Forestry and Fisheries	Other Services	Low
010698	HORT THERAPY AIDE	Ag, Forestry and Fisheries	Other Services	Low
020501	SOILS	Ag, Forestry and Fisheries	Other Services	Low
030101	NATURAL RESOURCES	Ag, Forestry and Fisheries	Other Services	Low
030301	FISHING & FISHERIES	Ag, Forestry and Fisheries	Other Services	Low

CIP	CIP_TITLE	FIRST LEVEL	SECOND LEVEL	HIGHEST LEVEL
030396	SHELLFISH CULTURIST	Ag, Forestry and Fisheries	Other Services	Low
030397	NET PEN OPERATOR	Ag, Forestry and Fisheries	Other Services	Low
030398	FISH HATCHERY OPERATOR	Ag, Forestry and Fisheries	Other Services	Low
030401	FORESTRY PROD & PROCESSING	Ag, Forestry and Fisheries	Other Services	Low
030404	FOREST PRODUCTS PROC TECH	Other Technical	Other Technical	Middle
030405	LOGGING	Transportation Operators	Machinists, Welding, Transportation Operator	High
030509	WOOD SCI & PULP/PAPER TECH	Other Technical	Engineering, Electronics, Other Tech	High
030598	URBAN FORESTRY	Other Personal Services	Other Services	Low
030601	WILDLIFE MANAGEMENT	Ag, Forestry and Fisheries	Other Services	Low
030698	TAXIDERMY	Other Technical	Other Technical	Middle
049998	LAND USE MGMT & RECLAMATN	Other Technical	Other Technical	Middle
080102	FASHION MERCHANDISING	Marketing and Sales	Marketing and Sales	Low
080103	FASHION MODELING	Marketing and Sales	Marketing and Sales	Low
080297	DISPLAY DESIGN	Marketing and Sales	Marketing and Sales	Low
080401	FINANCIAL MANAGEMENT	Managerial and Managerial Support	Accounting, Mid Management	Middle
080503	FLORISTRY MARKETING OPERAT	Marketing and Sales	Marketing and Sales	Low
080601	FOOD MARKETING	Marketing and Sales	Marketing and Sales	Low
080694	SUPERMARKET CHECKER	Marketing and Sales	Marketing and Sales	Low
080695	FOOD SPECIALTY CLERK	Marketing and Sales	Marketing and Sales	Low
080696	SUPERMKT MERCH CLERK/STOCK	Marketing and Sales	Marketing and Sales	Low
080697	MARKETING ASSISTANT	Marketing and Sales	Marketing and Sales	Low
080698	CASHIER/CHECKER	Marketing and Sales	Marketing and Sales	Low
080705	RETAIL MERCHANDISING	Marketing and Sales	Marketing and Sales	Low
080706	SALES	Marketing and Sales	Marketing and Sales	Low
080791	TRANSPORTATION AGENT/CLERK	Administrative Support	Administrative Support	Low
080792	SERVICE REPRESENTATIVE	Marketing and Sales	Marketing and Sales	Low
080796	RECEIVING CLERK	Administrative Support	Administrative Support	Low
080896	BUILDING MATERIALS MKT	Marketing and Sales	Marketing and Sales	Low
080897	HOME & OFFICE PRODUCTS MKT	Marketing and Sales	Marketing and Sales	Low
080898	MICRO SALES & SERVICE	Marketing and Sales	Marketing and Sales	Low
080902	HOTEL/MOTEL SERVICE & OPER	Other Personal Services	Other Services	Low
081105	TRAVEL SERVICE MARKETING	Marketing and Sales	Marketing and Sales	Low
081197	WAREHOUSE SERVICE & MARKET	Marketing and Sales	Marketing and Sales	Low
081198	TRANSPORTATION MARKETING	Transportation Operators	Machinists, Welding, Transportation Operator	High
081203	PARTS/ACCESSORIES MERCHND	Marketing and Sales	Marketing and Sales	Low
081209	PETROLEUM PROD RETAIL OPER	Transportation Operators	Marketing and Sales	Low
081297	AUTOMOTIVE SERVICE WRITER	Other Technical	Other Technical	Middle

CIP	CIP_TITLE	FIRST LEVEL	SECOND LEVEL	HIGHEST LEVEL
081298	TOOL & EQUIP RENTAL WORKER	Marketing and Sales	Marketing and Sales	Low
090298	ADVERTISING	Marketing and Sales	Marketing and Sales	Low
090401	MASS COMMUNICATIONS	Telecom, Media	Information Tech	High
090597	EMERGENCY DISPATCHER	Protective Services	Protective Services & Legal Asst	High
090997	AUDIO ENGINEERING	Other Technical	Other Technical	Middle
099998	TELECOMMUNICATIONS	Telecom, Media	Information Tech	High
100101	EDUCATIONAL MEDIA TECH	Telecom, Media	Information Tech	High
100103	PHOTOGRAPHIC LAB TECH	Other Technical	Other Technical	Middle
100104	RADIO/TV PROD & BROADCAST	Other Technical	Other Technical	Middle
100195	ELECTRONIC GRAPHICS & PUBL	Other Technical	Other Technical	Middle
100197	RADIO BROADCAST TECH	Other Technical	Other Technical	Middle
100198	MICROGRAPHICS	Information Tech	Information Tech	High
110298	COMPUTER PROGRAMMING	Information Tech	Information Tech	High
110301	DATA PROCESSING	Information Tech	Information Tech	High
110401	INFORMATION PROCESSING	Information Tech	Information Tech	High
119995	MULTIMEDIA TECHNICIAN	Information Tech	Information Tech	High
119996	COMPUTER CLIENT SERVER SPC	Information Tech	Information Tech	High
119998	MICROCOMPUTER APPLICATIONS	Information Tech	Information Tech	High
120202	--DELETED--BARBERING	Cosmetology	Other Services	Low
120401	BEAUTY SHOP MANAGEMENT	Cosmetology	Other Services	Low
120402	BARBERING/HAIRSTYLING	Cosmetology	Other Services	Low
120403	COSMETOLOGY	Cosmetology	Other Services	Low
120498	MANICURIST	Cosmetology	Other Services	Low
120501	BAKER/PASTRY CHEF	Culinary Arts	Other Services	Low
120503	CULINARY ARTS/CHEF TRAIN	Culinary Arts	Other Services	Low
120504	RESTAURANT MANAGEMENT	Managerial and Managerial Support	Accounting, Mid Management	Middle
120506	MEAT CUTTER	Precision, Production, Crafts	Other Technical	Middle
120507	WAITER/WAITRESS & DINE MGR	Culinary Arts	Other Services	Low
120596	BANQUET CHEF	Culinary Arts	Other Services	Low
120598	SOUS CHEF	Culinary Arts	Other Services	Low
131319	TECHNICAL TEACHER ED (VOC)	Education/Social Services	Social, Health & Ed Assistant	Low
131396	CADET INSTR-COSMETOLOGY	Education/Social Services	Social, Health & Ed Assistant	Low
131398	SKI SCHOOL INSTRUCTOR	Education/Social Services	Social, Health & Ed Assistant	Low
131501	TEACHER ASSISTING	Education/Social Services	Social, Health & Ed Assistant	Low
150101	ARCHITECTURAL DESIGN TECH	Engineering Tech	Engineering, Electronics, Other Tech	High
150201	CIVIL ENGINEERING TECH	Engineering Tech	Engineering, Electronics, Other Tech	High
150293	TRAFFIC ENGINEERING TECH	Transportation Operators	Engineering, Electronics, Other Tech	High

CIP	CIP_TITLE	FIRST LEVEL	SECOND LEVEL	HIGHEST LEVEL
150294	URBAN PLANNING	Education/Social Services	Social, Health & Ed Assistant	Low
150295	STRUCTURAL DESIGN TECH	Drafting	Engineering, Electronics, Other Tech	High
150298	HIGHWAY ENGINEERING TECH	Engineering Tech	Engineering, Electronics, Other Tech	High
150301	COMPUTER TECHNOLOGY	Computer Maintenance Tech	Information Tech	High
150303	ELECTRONICS TECHNOLOGY	Electronics Tech	Engineering, Electronics, Other Tech	High
150396	ELECTRICAL DESIGN TECH	Other Technical	Other Technical	Middle
150398	SEMI-CONDUCTOR TECH	Computer Maintenance Tech	Information Tech	High
150401	BIO-MED EQUIP MAINT & REP	Precision, Production, Crafts	Engineering, Electronics, Other Tech	High
150402	COMPUTER SERVICE TECH	Computer Maintenance Tech	Information Tech	High
150403	ELECTRO-MECH TECH	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150404	INSTRUMENT & CONTROL TECH	Precision, Production, Crafts	Engineering, Electronics, Other Tech	High
150405	ROBOTICS TECHNOLOGY	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150496	PRINTED WIRING TECH	Other Technical	Other Technical	Middle
150498	ELEC INSTRUMENTATION	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150501	AIR COND/HEAT/REFR DESIGN	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150503	ENERGY CONSERV TECH	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150506	WASTE WATER TECHNOLOGY	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150507	HAZARDOUS MATERIALS TECH	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150589	AUTOMOTIVE RECYCLING	Other Technical	Other Technical	Middle
150590	HABITAT TECHNICIAN	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150591	EARTH SCIENCE TECHNICIAN	Other Technical	Other Technical	Middle
150592	AIR POLLUTION CONTROL TECH	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150594	ENVIRONMENTAL TECH	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150595	RES CONSERV SPECIALIST	Other Technical	Other Technical	Middle
150596	RESIDENT ENERGY EFFIC	Precision, Production, Crafts	Other Technical	Middle
150597	WATER TREATMENT TECH	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150603	INDUSTRIAL TECHNOLOGY	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150607	PLASTICS TECHNOLOGY	Other Technical	Other Technical	Middle
150611	METALLURGY TECHNOLOGY	Other Technical	Other Technical	Middle
150693	FABRIC WORKER	Transportation Operators	Engineering, Electronics, Other Tech	High
150694	MANUFACTURING TECHNOLOGY	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150695	CONCRETE TECHNOLOGY	Construction Trades	Construction Trades	Middle
150696	COMPOSITE MATERIALS TECH	Other Technical	Other Technical	Middle
150697	TOOLING	Machinist	Machinists, Welding, Transportation Operator	High
150701	OCC SAFETY & HEALTH TECH	Other Health Tech	Other Health Tech	High
150702	QUALITY CONTROL	Precision, Production, Crafts	Engineering, Electronics, Other Tech	High
150797	ELECTRONIC/FIRE SECURITY	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High

CIP	CIP_TITLE	FIRST LEVEL	SECOND LEVEL	HIGHEST LEVEL
150798	MATERIALS TESTING	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150805	MECHANICAL DESIGN TECH	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150897	MARINE PROPULSION TECH	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
150903	PETROLEUM TECHNOLOGY	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
151001	CONSTRUCTION TECH	Construction Trades	Construction Trades	Middle
151102	SURVEYING & MAPPING TECH	Engineering Tech	Engineering, Electronics, Other Tech	High
151103	FLUID POWER TECHNOLOGY	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
151196	GEOGRAPHIC INFO SYSTEMS	Information Tech	Information Tech	High
151197	SURVEY DRAFTING	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
151198	SURVEY CHAIN PERSON	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
159998	ENGINEERING TECH	Engineering Tech	Engineering, Electronics, Other Tech	High
190503	DIETETIC TECH	Other Technical	Other Health Services	Middle
200201	CARE & GUIDE OF CHILDREN	Early Childhood Ed	Early Childhood Ed	Low
200202	CHILD CARE AIDE/ASSISTING	Early Childhood Ed	Early Childhood Ed	Low
200203	CHILD CARE MANAGEMENT	Early Childhood Ed	Early Childhood Ed	Low
200297	EARLY CHILDHOOD/FOSTER CAR	Early Childhood Ed	Early Childhood Ed	Low
200298	EARLY CHILD SPEC ED TECH	Early Childhood Ed	Early Childhood Ed	Low
200301	CLOTHING MGMT-PROD & SVCS	Other Personal Services	Other Services	Low
200303	POWER SEWING MACHINE OPER	Other Personal Services	Other Services	Low
200306	APPAREL MANAGEMENT	Marketing and Sales	Marketing and Sales	Low
200309	COMMERCIAL DRYCLEAN/LAUNDR	Other Personal Services	Other Services	Low
200398	CUSTOM APPAREL-DESIGN/CONS	Precision, Production, Crafts	Other Technical	Middle
200404	DIETETIC ASSISTANT	Other Health Services	Other Services	Low
200405	CATERER	Culinary Arts	Other Services	Low
200498	INSTIT FOOD WORKER & ADMIN	Other Personal Services	Other Services	Low
200501	HOME FURN & EQUIP MGMT	Other Personal Services	Other Services	Low
200598	INTERIOR DECORATION	Marketing and Sales	Marketing and Sales	Low
200601	INSTITUTIONAL & HOME MGMT	Other Personal Services	Accounting, Mid Management	Middle
200602	COMPANION TO THE AGED	Other Personal Services	Other Services	Low
200604	CUSTODIAL/BLDG SERVICES	Other Personal Services	Other Services	Low
200605	EXECUTIVE HOUSEKEEPING	Other Personal Services	Other Services	Low
220103	LEGAL ASSISTANT	Legal Assistant	Protective Services & Legal Asst	High
231101	TECHNICAL REPORT WRITING	Other Technical	Other Technical	Middle
250301	LIBRARY ASSISTING	Library Assistant	Social, Health & Ed Assistant	Low
310101	PARKS & RECREATION, GENRL	Protective Services	Protective Services & Legal Asst	High
310398	GOLF MANAGEMENT	Other Technical	Other Technical	Middle
310504	SPORTS TRAINING ASSISTING	Other Technical	Other Health Services	Middle

CIP	CIP_TITLE	FIRST LEVEL	SECOND LEVEL	HIGHEST LEVEL
319997	WATER RESOURCES	Other Technical	Other Technical	Middle
319998	PARK RANGER	Protective Services	Protective Services & Legal Asst	High
400797	MARINE SCIENCE TECHNOLOGY	Other Technical	Other Technical	Middle
400798	OCEANOGRAPHIC TECHNOLOGY	Other Technical	Other Technical	Middle
410101	BIOLOGICAL LAB TECH	Other Technical	Other Technical	Middle
410110	--DELETED--CHEMICAL TECHNOLOGY	Other Technical	Other Technical	Middle
410204	INDUSTRIAL RADIOLOGY	Precision, Production, Crafts	Other Technical	Middle
410205	NUCLEAR/NUCLEAR POWER TECH	Other Technical	Engineering, Electronics, Other Tech	High
410301	CHEMICAL TECHNOLOGY	Other Technical	Other Technical	Middle
410310	--DELETED--CHEMICAL TECHNOLOGY	Other Technical	Other Technical	Middle
430102	CORRECTIONS	Protective Services	Protective Services & Legal Asst	High
430104	ADMINISTRATION OF JUSTICE	Protective Services	Protective Services & Legal Asst	High
430106	FORENSIC TECH	Protective Services	Protective Services & Legal Asst	High
430107	LAW ENFORCEMENT	Protective Services	Protective Services & Legal Asst	High
430109	SECURITY SERVICES	Protective Services	Protective Services & Legal Asst	High
430194	CORRECTIONAL MENTAL HEALTH	Protective Services	Protective Services & Legal Asst	High
430195	PRIVATE INVESTIGATOR	Protective Services	Protective Services & Legal Asst	High
430196	PUBLIC SAFETY COMMUNIC	Protective Services	Protective Services & Legal Asst	High
430197	POLICE RECORDS TECH	Protective Services	Protective Services & Legal Asst	High
430198	POLYGRAPH EXAMINER TECH	Protective Services	Protective Services & Legal Asst	High
430202	FIRE SCIENCE/ADMIN	Managerial and Managerial Support	Accounting, Mid Management	Middle
430203	FIRE FIGHTING	Protective Services	Protective Services & Legal Asst	High
430297	EMERGENCY MANAGEMENT	Protective Services	Protective Services & Legal Asst	High
430298	FOREST FIRE MANAGEMENT	Protective Services	Protective Services & Legal Asst	High
440401	PUBLIC ADMINISTRATION	Protective Services	Protective Services & Legal Asst	High
440798	SOCIAL SERVICE TRAINING	Education/Social Services	Social, Health & Ed Assistant	Low
459997	APPLIED GEOGRAPHY	Education/Social Services	Social, Health & Ed Assistant	Low
460101	MASONRY/BRICKLAYING	Construction Trades	Construction Trades	Middle
460197	TILE SETTING	Construction Trades	Construction Trades	Middle
460198	CLEANER/POINTER/CAULKER	Construction Trades	Construction Trades	Middle
460201	CARPENTRY	Construction Trades	Construction Trades	Middle
460298	PILE DRIVING	Construction Trades	Construction Trades	Middle
460301	ELECTRIC/POWER TRANSM INST	Construction Trades	Construction Trades	Middle
460302	INDUSTRIAL ELECTRICITY	Construction Trades	Construction Trades	Middle
460303	UTILITY ELECTR & LINEWRK	Construction Trades	Construction Trades	Middle
460398	RESIDENTIAL ELECTRICIAN	Precision, Production, Crafts	Construction Trades	Middle
460401	BLDGS & GROUNDS MAINT	Building and Grounds Maintenance	Other Technical	Middle

CIP	CIP_TITLE	FIRST LEVEL	SECOND LEVEL	HIGHEST LEVEL
460403	CONSTRUCTION INSPECTION	Construction Trades	Construction Trades	Middle
460408	PAINTING & DECORATING	Construction Trades	Construction Trades	Middle
460493	CONCRETE PLACING/FINISHING	Construction Trades	Construction Trades	Middle
460494	DRY WALL FINISHER	Construction Trades	Construction Trades	Middle
460496	MOBILE HOME SET UP	Construction Trades	Construction Trades	Middle
460497	--DELETED--MOBILE HOME SETUP	Construction Trades	Construction Trades	Middle
460498	ACOUSTICAL APPLICATORS	Construction Trades	Construction Trades	Middle
460499	CONSTRUCTION TRADES OTHER	Construction Trades	Construction Trades	Middle
460501	PLUMBING/PIPEFIT/STM FIT	Construction Trades	Construction Trades	Middle
460598	BOILERMAKER	Construction Trades	Construction Trades	Middle
469993	DRYWALL INSTALLATION	Construction Trades	Construction Trades	Middle
469994	PLASTERING	Construction Trades	Construction Trades	Middle
469995	INSULATING	Construction Trades	Construction Trades	Middle
469996	GLAZIER	Construction Trades	Construction Trades	Middle
469997	FLOOR COVER INSTALLATION	Construction Trades	Construction Trades	Middle
469998	JOB SKILLS FOR CONST TRADE	Construction Trades	Construction Trades	Middle
470101	ELEC & ELECTR EQUIP REPAIR	Electrical Equipment Repair	Engineering, Electronics, Other Tech	High
470102	OFFICE MACHINE REPAIR	Electrical Equipment Repair	Engineering, Electronics, Other Tech	High
470103	COMMUNICATIONS ELECTRONIC	Electrical Equipment Repair	Engineering, Electronics, Other Tech	High
470104	--DELETED--COMM ELECTRONICS	Electrical Equipment Repair	Engineering, Electronics, Other Tech	High
470105	INDUSTRIAL ELECTRONICS	Electrical Equipment Repair	Engineering, Electronics, Other Tech	High
470106	APPLIANCE REPAIR	Electrical Equipment Repair	Engineering, Electronics, Other Tech	High
470190	BOWLING CTR MAINT & REPAIR	Precision, Production, Crafts	Other Technical	Middle
470192	VENDING & AMUSE MACH REPR	Electrical Equipment Repair	Engineering, Electronics, Other Tech	High
470193	DATA COMMUNICATIONS TECH	Information Tech	Information Tech	High
470194	ELECTRONIC EQUIP SERVICE	Electrical Equipment Repair	Engineering, Electronics, Other Tech	High
470195	INDUSTRIAL VIDEO MAINT	Electrical Equipment Repair	Engineering, Electronics, Other Tech	High
470196	FOOD DISPENSING EQUIP REPR	Engineering Tech	Engineering, Electronics, Other Tech	High
470197	HOME ENTERTAIN ELECTRONIC	Electrical Equipment Repair	Engineering, Electronics, Other Tech	High
470198	MICRO-COMPUTER TECH	Computer Maintenance Tech	Information Tech	High
470201	HEAT/AIR COND/REFRIG MECH	Precision, Production, Crafts	Other Technical	Middle
470298	RESIDENTIAL REFRIG TECH	Precision, Production, Crafts	Engineering, Electronics, Other Tech	High
470302	INDUST MAINT TECH/MILLWRGH	Precision, Production, Crafts	Engineering, Electronics, Other Tech	High
470395	ELECTRO-FLUID POWER SPEC	Electrical Equipment Repair	Engineering, Electronics, Other Tech	High
470396	PROCESS MACH MAINT & REPR	Precision, Production, Crafts	Engineering, Electronics, Other Tech	High
470398	--DELETED--SAW FILING	Precision, Production, Crafts	Other Technical	Middle
470404	MUS-BAND INSTR SVCS & RPR	Precision, Production, Crafts	Other Technical	Middle

CIP	CIP_TITLE	FIRST LEVEL	SECOND LEVEL	HIGHEST LEVEL
470408	INSTRUMENTATION/WATCH RPR	Precision, Production, Crafts	Other Technical	Middle
470494	AUDIO-VISUAL EQUIP REPAIR	Other Technical	Other Technical	Middle
470495	COMPUTER INTEGRATED MFG	Precision, Production, Crafts	Other Technical	Middle
470496	CAMERA REPAIR	Precision, Production, Crafts	Other Technical	Middle
470497	PWR SEWING MACH REPAIR	Precision, Production, Crafts	Other Technical	Middle
470498	INDUSTRIAL PLANT SERVICES	Precision, Production, Crafts	Other Technical	Middle
470501	STATIONARY ENGINEER	Precision, Production, Crafts	Engineering, Electronics, Other Tech	High
470597	ELECTRICAL POWER GENERATE	Other Technical	Other Technical	Middle
470598	ELECTRICAL POWER TECH	Precision, Production, Crafts	Engineering, Electronics, Other Tech	High
470603	AUTO BODY REBLD & REFIN	Auto Diesel	Auto & Diesel Mechanics	Middle
470604	AUTO MECHANICS	Auto Diesel	Auto & Diesel Mechanics	Middle
470605	DIESEL & HEAVY EQUIPMENT	Auto Diesel	Auto & Diesel Mechanics	Middle
470606	SMALL ENGINE REPAIR	Precision, Production, Crafts	Other Technical	Middle
470607	AIRCRAFT MECHS/AIRFRAME	Airframe/Power Plant	Machinists, Welding, Transportation Operator	High
470608	AIRCRAFT MECHS/PWRPLANT	Airframe/Power Plant	Machinists, Welding, Transportation Operator	High
470611	MOTORCYCLE REPAIR	Auto Diesel	Auto & Diesel Mechanics	Middle
470685	RECREATIONAL VEHICLE TECH	Precision, Production, Crafts	Other Technical	Middle
470686	AVIATION ELECTRONICS	Airframe/Power Plant	Machinists, Welding, Transportation Operator	High
470687	AIRCRAFT/FRAME/PWRPLANT ME	Airframe/Power Plant	Machinists, Welding, Transportation Operator	High
470688	AUTO DETAILER	Auto Diesel	Other Services	Low
470689	AUTO PAINTER	Precision, Production, Crafts	Other Technical	Middle
470690	AUTO ELECTRONICS TECH	Auto Diesel	Auto & Diesel Mechanics	Middle
470692	HELICOPTER MECHANICS	Auto Diesel	Auto & Diesel Mechanics	Middle
470694	MATERIALS HNDLG EQ MECH	Auto Diesel	Auto & Diesel Mechanics	Middle
470696	TRAILER REBUILD/REFINISH	Precision, Production, Crafts	Other Technical	Middle
470697	TRUCK & AUTO REBLD/REFIN	Auto Diesel	Auto & Diesel Mechanics	Middle
470698	AUTO SERV CENTER SPCLST	Precision, Production, Crafts	Auto & Diesel Mechanics	Middle
480101	DRAFTING	Drafting	Engineering, Electronics, Other Tech	High
480102	ARCHITECTURAL DRAFTING	Drafting	Engineering, Electronics, Other Tech	High
480103	STRUCTURAL DRAFTING TECH	Drafting	Engineering, Electronics, Other Tech	High
480104	ELECTRO-MECH DRAFTING	Drafting	Engineering, Electronics, Other Tech	High
480105	MECHANICAL DRAFTING	Drafting	Engineering, Electronics, Other Tech	High
480194	AIRCRAFT DRAFTING	Engineering Tech	Engineering, Electronics, Other Tech	High
480195	FLUID POWER DRAFTING	Engineering Tech	Engineering, Electronics, Other Tech	High
480196	BLUEPRINT READING	Drafting	Engineering, Electronics, Other Tech	High
480197	GEN DESIGN & DRAFTING	Drafting	Engineering, Electronics, Other Tech	High
480198	CIVIL DRAFTING	Engineering Tech	Engineering, Electronics, Other Tech	High

CIP	CIP_TITLE	FIRST LEVEL	SECOND LEVEL	HIGHEST LEVEL
480201	GRAPHIC ARTS/PRINTING	Precision, Production, Crafts	Other Technical	Middle
480206	LITHO/PHOTOGRAPHY/PLATEMKG	Precision, Production, Crafts	Other Technical	Middle
480212	DESKTOP PUBLISH EQUIP OPER	Transportation Operators	Other Technical	Middle
480295	SILK SCREEN TECHNOLOGY	Precision, Production, Crafts	Other Technical	Middle
480296	SIGN PAINTING	Precision, Production, Crafts	Other Technical	Middle
480297	VISUAL COMMUNICATIONS	Other Technical	Other Technical	Middle
480298	PHOTO-JOURNALISM	Other Technical	Other Technical	Middle
480303	UPHOLSTERING	Precision, Production, Crafts	Other Technical	Middle
480398	SADDLEMAKING & REPAIR	Precision, Production, Crafts	Other Technical	Middle
480501	MACHINIST/MACHINE TECH	Machinist	Machinists, Welding, Transportation Operator	High
480506	SHEET METAL	Machinist	Machinists, Welding, Transportation Operator	High
480507	TOOLMAKER	Machinist	Machinists, Welding, Transportation Operator	High
480508	WELDING/BRAZING/SOLDERING	Welding	Machinists, Welding, Transportation Operator	High
480584	MANUFACTURING TECH CORE	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
480585	THERMOPLASTIC WELDING/BOND	Machinist	Machinists, Welding, Transportation Operator	High
480586	MACHINIST SPECIALIST	Machinist	Machinists, Welding, Transportation Operator	High
480587	PATTERNMAKING	Precision, Production, Crafts	Other Technical	Middle
480588	WELDING SPECIALIST	Welding	Machinists, Welding, Transportation Operator	High
480589	PIPE WELDER	Construction Trades	Construction Trades	Middle
480590	RIVETER MECHANIC	Precision, Production, Crafts	Other Technical	Middle
480591	METAL FABRICATION	Machinist	Machinists, Welding, Transportation Operator	High
480592	CMPTR NUMERIC CONTROL TECH	Machinist	Machinists, Welding, Transportation Operator	High
480593	ELECTROPLATER	Precision, Production, Crafts	Other Technical	Middle
480594	COPPERSMITH	Machinist	Machinists, Welding, Transportation Operator	High
480595	ORNAMENTAL IRONWORKER	Construction Trades	Construction Trades	Middle
480596	MAINTENANCE WELDER	Machinist	Machinists, Welding, Transportation Operator	High
480597	IRONWORKER/STRUCTURAL	Machinist	Machinists, Welding, Transportation Operator	High
480598	AUTOMOTIVE MACHINIST	Machinist	Machinists, Welding, Transportation Operator	High
480599	FOUNDRY WORKER	Transportation Operators	Other Technical	Middle
480703	CABINET MKG & MILLWORK	Precision, Production, Crafts	Other Technical	Middle
489995	PRODUCTION MILLWORK	Precision, Production, Crafts	Other Technical	Middle
489996	MODEL MAKING TECH	Other Technical	Other Technical	Middle
489997	ELECTRONICS ASSEMBLY	Precision, Production, Crafts	Other Technical	Middle
489998	ELECTRONICS PACKAGING	Precision, Production, Crafts	Engineering, Electronics, Other Tech	High
490102	COMMERCIAL PILOT	Other Technical	Other Technical	Middle
490105	AIR TRAFFIC CONTROL	Other Technical	Other Technical	Middle
490106	FLIGHT ATTENDANT	Other Personal Services	Other Services	Low

CIP	CIP_TITLE	FIRST LEVEL	SECOND LEVEL	HIGHEST LEVEL
490196	COMML HELICOPTER PILOT	Transportation Operators	Machinists, Welding, Transportation Operator	High
490197	COMM PILOT-CROP DUSTING	Transportation Operators	Machinists, Welding, Transportation Operator	High
490198	AIR CARGO	Transportation Operators	Machinists, Welding, Transportation Operator	High
490202	CONSTRUCTION EQUIP OPER	Transportation Operators	Machinists, Welding, Transportation Operator	High
490205	TRUCK & BUS DRIVER	Transportation Operators	Machinists, Welding, Transportation Operator	High
490297	VEHICLE & EQUIPMENT OPER	Transportation Operators	Machinists, Welding, Transportation Operator	High
490298	EARTH & ROCK DRILLING	Construction Trades	Construction Trades	Middle
490303	COMMERCIAL FISHING	Ag, Forestry and Fisheries	Other Services	Low
490304	DIVING TECHNOLOGY	Other Technical	Other Technical	Middle
490306	MARINE MNT & RPR/PWR BOAT	Precision, Production, Crafts	Other Technical	Middle
490309	MERCHANT MARINE OFFICER	Other Personal Services	Machinists, Welding, Transportation Operator	High
490395	NET HANGER	Precision, Production, Crafts	Other Technical	Middle
490396	MARINA SERVICES TECHNOLOGY	Industrial Tech (except electronics tech)	Engineering, Electronics, Other Tech	High
490397	SHIPWRIGHT	Precision, Production, Crafts	Other Technical	Middle
490398	MARINE CARPENTRY	Precision, Production, Crafts	Other Technical	Middle
490401	RAILROAD OPERATIONS TECH	Transportation Operators	Machinists, Welding, Transportation Operator	High
499996	WAREHOUSE & DISTRIB SPEC	Transportation Operators	Machinists, Welding, Transportation Operator	High
499997	TRANSPORTATION	Transportation Operators	Machinists, Welding, Transportation Operator	High
499998	TRANSPORTATION MANAGEMENT	Managerial and Managerial Support	Accounting, Mid Management	Middle
500402	COMMERCIAL ART & ILLUSTRAT	Precision, Production, Crafts	Other Technical	Middle
500404	INDUSTRIAL DESIGN	Precision, Production, Crafts	Other Technical	Middle
500406	COMMERCIAL PHOTOGRAPHY	Precision, Production, Crafts	Other Technical	Middle
500408	INTERIOR DESIGN	Marketing and Sales	Marketing and Sales	Low
500498	PACKAGE DESIGN TECH	Other Technical	Other Technical	Middle
500713	JEWELRY DESIGN & REPAIR	Precision, Production, Crafts	Other Technical	Middle
500798	MUSEUM/GALLERY OPERATIONS	Managerial and Managerial Support	Humanities	Middle
500909	MUSIC BUS MGMT & MERCHANDZ	Managerial and Managerial Support	Accounting, Mid Management	Middle
500997	PROFESSIONAL ENTERTAINMENT	Other Personal Services	Other Services	Low
500998	MUSIC INSTRUMNT DIGITAL IN	Other Technical	Other Technical	Middle
510205	SIGN LANGUAGE INTERPRETER	Education/Social Services	Other Health Tech	High
510298	HEARING AID FITTER/DISP	Other Health Services	Other Services	Low
510301	COMM HEALTH WORK/AIDS ED	Other Health Services	Other Services	Low
510391	NEGOTIATION & MEDIATION	Managerial and Managerial Support	Accounting, Mid Management	Middle
510392	HUMAN SERVICE TRAINING	Education/Social Services	Social, Health & Ed Assistant	Low
510394	SOC/HUMAN SRV COUNSEL/CWK	Education/Social Services	Social, Health & Ed Assistant	Low
510395	SOCIAL LEGAL ADVOCATE	Education/Social Services	Social, Health & Ed Assistant	Low
510396	GUIDANCE ASSISTING	Education/Social Services	Social, Health & Ed Assistant	Low

CIP	CIP_TITLE	FIRST LEVEL	SECOND LEVEL	HIGHEST LEVEL
510601	DENTAL ASSISTANT	Dental Assisting	Other Health Services	Middle
510602	DENTAL HYGIENIST	Dental Hygienist	Other Health Tech	High
510603	DENTAL LABORATORY TECHNICN	Precision, Production, Crafts	Other Technical	Middle
510696	DENTURE TECHNICIAN	Other Health Tech	Other Health Tech	High
510697	STERILIZATION/DISINF TECH	Culinary Arts	Other Health Services	Middle
510698	DENTAL X-RAY TECHNICIAN	Dental Assisting	Other Health Services	Middle
510702	HOSPITAL/HEALTH FACIL ADMN	Other Health Tech	Accounting, Mid Management	Middle
510703	HEALTH UNIT COORD/WARD CLK	Administrative Support	Administrative Support	Low
510705	MEDICAL OFFICE RECPT/MGMNT	Administrative Support	Administrative Support	Low
510707	MEDICAL RECORDS TECHNOLOGY	Other Health Tech	Other Health Tech	High
510708	MEDICAL TRANSCRIPTION	Administrative Support	Administrative Support	Low
510795	HEALTH RECORDS CLERK	Administrative Support	Administrative Support	Low
510796	MEDICAL CLERK	Administrative Support	Administrative Support	Low
510797	HEALTH CARE PLANNING	Other Health Tech	Other Health Tech	High
510798	HOSPITAL CENTRAL SRV TECH	Other Health Tech	Other Health Tech	High
510801	MEDICAL ASSISTANT	Medical Assisting	Other Health Services	Middle
510803	OCCUPATIONAL THERAPY ASST	Occupational Therapy	Other Health Tech	High
510805	PHARMACY TECHNICIAN/ASST	Pharmacy Assisting	Other Health Services	Middle
510806	PHYSICAL THERAPY ASSISTANT	Physical Therapy	Other Health Tech	High
510808	VETERINARIAN ASST/TECHNICN	Veterinarian Assistant	Social, Health & Ed Assistant	Low
510894	PHLEBOTOMY	Medical Assisting	Other Health Services	Middle
510895	MASSAGE THERAPIST	Other Health Services	Other Health Services	Middle
510896	HEALTH PHYSICS TECHNOLOGY	Other Health Tech	Other Health Tech	High
510897	CHIROPRACTIC ASSISTANT	Other Health Services	Other Health Services	Middle
510898	PODIATRIC ASSISTANT	Other Health Services	Other Services	Low
510901	CARDIOVASCULAR TECHNOLOGY	Paramedic EMT,Operating Tech	Other Health Tech	High
510902	ELECTROCARDIOGRAPH TECH	Medical Xray	Other Health Tech	High
510904	PARAMEDIC-EMT	Paramedic EMT,Operating Tech	Other Health Tech	High
510905	NUCLEAR MEDICAL TECHNOLOGY	Other Health Tech	Other Health Tech	High
510907	MEDICAL RADIOLOGIC TECH	Medical Xray	Other Health Tech	High
510908	RESPIRATORY THERAPY TECH	Other Health Tech	Other Health Tech	High
510909	SURGICAL/OPERATING RM TECH	Paramedic EMT,Operating Tech	Other Health Tech	High
510910	DIAGNOSTIC MED SONOGRAPHY	Medical Xray	Other Health Tech	High
510991	POLYSOMNOGRAPHIC TECH	Medical Xray	Other Health Tech	High
510992	INTRAVENOUS THERAPY	Other Health Tech	Other Health Tech	High
510993	RADIATION THERAPY TECH	Medical Xray	Other Health Tech	High
510995	PULMONARY DIAGNOSIS TECH	Other Health Tech	Other Health Tech	High

CIP	CIP_TITLE	FIRST LEVEL	SECOND LEVEL	HIGHEST LEVEL
510996	CARDIAC INVASIVE TECH	Paramedic EMT,Operating Tech	Other Health Tech	High
510997	ECHOCARDIOGRAPHIC TECH	Other Health Tech	Other Health Tech	High
511004	MEDICAL LABORATORY TECH	Med Lab Tech/Histologic	Other Health Tech	High
511097	BIOLOGICAL LABORATORY TECH	Other Health Tech	Other Health Tech	High
511098	HISTOLOGIC TECHNOLOGY	Med Lab Tech/Histologic	Other Health Tech	High
511501	SUBSTANCE ABUSE COUNSELING	Education/Social Services	Social, Health & Ed Assistant	Low
511502	MENTAL HEALTH SRV TECH	Education/Social Services	Social, Health & Ed Assistant	Low
511597	ALCOHOLISM COUNSELING	Education/Social Services	Social, Health & Ed Assistant	Low
511598	DRUG ABUSE COUNSELING	Education/Social Services	Social, Health & Ed Assistant	Low
511601	ASSOCIATE DEGREE NURSING	Associate Degree Nurse	Nursing (RN & LPN)	High
511613	PRACTICAL NURSING	Practical Nurse	Nursing (RN & LPN)	High
511614	NURSING ASSISTANT	Nursing Assistant	Social, Health & Ed Assistant	Low
511615	HOME HEALTH AIDE	Other Health Services	Other Services	Low
511801	OPTICIANRY/DISPENSING OPT	Other Health Tech	Other Health Tech	High
511802	OPTOMETRIC TECHNOLOGY	Other Health Tech	Other Health Services	Middle
511804	ORTHOPTICS	Other Health Services	Other Services	Low
512307	ORTHOTICS/PROSTHETICS	Other Health Tech	Other Health Tech	High
512309	RECREATIONAL THERAPY TECH	Other Health Services	Other Services	Low
512310	REHABILITATION COUNSELING	Other Health Services	Other Services	Low
512395	ORTHOPAEDIC ASSISTING	Other Health Services	Other Services	Low
512398	REHABILITATION SVC WRKR	Other Health Services	Other Services	Low
512696	GERIATRIC AIDE	Other Health Services	Other Services	Low
512697	RECREATIONAL THERAPY AIDE	Other Health Services	Other Services	Low
512698	SPEECH/HEARING THERAPY AID	Other Health Services	Other Health Services	Middle
512703	MEDICAL ILLUSTRATING	Medical Assisting	Other Health Services	Middle
512798	MEDICAL PHOTOGRAPHY	Medical Assisting	Other Health Services	Middle
519998	MULTI-SKILLED HEALTH CARE	Other Health Services	Other Health Services	Middle
520201	BUSINESS ADMIN & MGMT	Managerial and Managerial Support	Accounting, Mid Management	Middle
520204	SECRETARIAL & OFFICE MGMT	Administrative Support	Administrative Support	Low
520205	PRODUCT MANAGEMENT	Managerial and Managerial Support	Accounting, Mid Management	Middle
520206	FOUNDATION TECHNOLOGY	Managerial and Managerial Support	Accounting, Mid Management	Middle
520297	PURCHASING	Managerial and Managerial Support	Accounting, Mid Management	Middle
520302	ACCOUNTING TECHNICIAN	Accounting	Accounting, Mid Management	Middle
520397	ACCOUNTING & COMPUTING	Accounting	Accounting, Mid Management	Middle
520398	BOOKKEEPING	Administrative Support	Administrative Support	Low
520401	SECRETARY	Administrative Support	Administrative Support	Low
520402	EXECUTIVE ASST/SECRETARY	Administrative Support	Administrative Support	Low

CIP	CIP_TITLE	FIRST LEVEL	SECOND LEVEL	HIGHEST LEVEL
520403	LEGAL ADMIN ASST/SECRETARY	Administrative Support	Administrative Support	Low
520404	MED ADMIN/ASST SECRETARY	Administrative Support	Administrative Support	Low
520405	COURT REPORTER	Administrative Support	Administrative Support	Low
520406	RECEPTIONIST	Administrative Support	Administrative Support	Low
520407	INFORMATION DATA ENTRY	Administrative Support	Administrative Support	Low
520408	CLERK TYPIST	Administrative Support	Administrative Support	Low
520485	WORD PROCESSING	Administrative Support	Administrative Support	Low
520486	RECORDS MANAGEMENT	Administrative Support	Administrative Support	Low
520487	STOCK & INVENTORY CLERK	Administrative Support	Administrative Support	Low
520488	DUPLICATING MACHINE OPER	Administrative Support	Administrative Support	Low
520489	GENERAL OFFICE/CLERICAL	Administrative Support	Administrative Support	Low
520490	TYPING/GENERAL OFFICE	Administrative Support	Administrative Support	Low
520491	MACHINE SHORTHAND	Administrative Support	Administrative Support	Low
520492	EDUCATIONAL SECRETARY	Administrative Support	Administrative Support	Low
520493	SECRETARIAL HOME ARTS	Administrative Support	Administrative Support	Low
520494	REAL ESTATE SECRETARY	Marketing and Sales	Marketing and Sales	Low
520495	DENTAL OFFICE MNGR/RECPT	Administrative Support	Administrative Support	Low
520496	INSURANCE SECRETARY	Administrative Support	Administrative Support	Low
520497	OFFICE ASSISTANT	Administrative Support	Administrative Support	Low
520498	FILING/RECORDS MGMT	Administrative Support	Administrative Support	Low
520701	SMALL BUS/ENTERPRISE MGMNT	Managerial and Managerial Support	Accounting, Mid Management	Middle
520797	SMALL BUSINESS OWNERSHIP	Managerial and Managerial Support	Accounting, Mid Management	Middle
520798	APARTMENT & CONDO MGMT	Managerial and Managerial Support	Accounting, Mid Management	Middle
520805	INSURANCE & RISK MGMNT	Administrative Support	Administrative Support	Low
520894	INSURANCE CLERK	Administrative Support	Administrative Support	Low
520895	BANK & FINANCIAL SUPP SRVC	Administrative Support	Administrative Support	Low
520896	INSURANCE ADJUSTER	Administrative Support	Administrative Support	Low
520898	TELLER TRAINING	Administrative Support	Administrative Support	Low
520901	RESORT MANAGEMENT	Managerial and Managerial Support	Accounting, Mid Management	Middle
520902	HOTEL/MOTEL MANAGEMENT	Managerial and Managerial Support	Accounting, Mid Management	Middle
520903	HOSPITALITY & TOURISM MGMT	Managerial and Managerial Support	Accounting, Mid Management	Middle
520995	GAMING/CASINO OPERATIONS	Managerial and Managerial Support	Accounting, Mid Management	Middle
520996	CLUB & TAVERN MANAGEMENT	Managerial and Managerial Support	Accounting, Mid Management	Middle
521001	PERSONNEL TECHNICIAN	Administrative Support	Administrative Support	Low
521098	PERSONNEL SUPVR & LEADERSH	Managerial and Managerial Support	Accounting, Mid Management	Middle
521101	INTERNATIONAL TRADE	Marketing and Sales	Marketing and Sales	Low
521401	BUS MKT & MARKETING MGMNT	Marketing and Sales	Marketing and Sales	Low

CIP	CIP_TITLE	FIRST LEVEL	SECOND LEVEL	HIGHEST LEVEL
521496	RESEARCH & SURVEY TECHNICN	Precision, Production, Crafts	Other Technical	Middle
521497	RETAIL MANAGEMENT	Managerial and Managerial Support	Accounting, Mid Management	Middle
521498	SUPERMARKET MANAGEMENT	Marketing and Sales	Marketing and Sales	Low
521501	REAL ESTATE	Marketing and Sales	Marketing and Sales	Low
521597	REAL ESTATE ESCROW	Marketing and Sales	Marketing and Sales	Low
521598	REAL ESTATE APPRAISAL	Marketing and Sales	Marketing and Sales	Low
521601	TAX PRACTICES	Education/Social Services	Other Services	Low

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